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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 46398-2025

Loss in weight feeder

失重秤

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting. Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed by the China National Light Industry Council. This document is under the jurisdiction of the National Technical Committee on Standardization of Weighing Instruments (SAC/TC97). This document was drafted by: Jiangsu Bailing Weighing Instrument Manufacturing Co., Ltd., Jiangsu Provincial Institute of Metrology, and Zhongchu Hengke Internet of Things System Co., Ltd. The company, Shandong Bosuo Automation Technology Co., Ltd., Wuxi Lingge Machinery Technology Co., Ltd., Henan Fengbo Automation Co., Ltd., Zhuhai Changlu Industrial Automation Control System Co., Ltd. and Shanxi Licheng Automation Technology Co., Ltd. The main drafters of this document are. Sun Wenjie, Liu Anlin, Wang Haitao, Song Kuiyun, Xu Weijun, Wang Hongliang, Huang Guolei, He Xiaodong, Wang Kai, and Jiang Fan.

Loss-in-weight balances entered my country in the 1990s and are widely used in metallurgy, non-ferrous metals, casting, chemical industry, grain and oil, feed, building materials, and glass industries. In fields such as glass, textiles, and coatings, there is a trend towards integration, miniaturization, and high accuracy. The product structure utilizes a fully sealed material handling system. The structure encloses the material in the weighing

bin and conveyor, reducing contamination; the material conveyor outputs a reduced flow rate and a set control flow rate. In contrast, the weight of the material in the weighing chamber is measured in real time by one or more load cells, and the flow rate is controlled and the actual weight reduction is compared. In comparison, the loss-in-weight scale belongs to the higher accuracy class of continuous cumulative automatic weighing instruments. The loss-in-weight scale aligns with the green production practices currently advocated by the state. It aligns with the principles of efficient and pollution-free production environments, has gained recognition from relevant industrial enterprises, and has been widely applied. Loss-in-weight scales have specific requirements regarding their adaptability to the materials being weighed. Currently, some loss-in-weight scales from Japan, the United States, Germany, and other countries are available on the domestic market. The accuracy of a product's measurement is also related to the technical specifications of the materials used on-site. Establishing product standards for loss-in-weight scales will be beneficial. Conduct international exchanges. Loss-of-weight scale

1 Scope

GB/T 46398-2025 is the Chinese national standard covering the feeder that meters by weighing itself as it empties - the feed rate accuracy and its short-term variation, the refill cycle during which the weight signal is useless, the calibration, and the environment of vibration and draught that corrupts a load cell. First edition, under the China National Light Industry Council. In force from 1 May 2026. Issued on 5 October 2025, it has been in force since 1 May 2026.

This document specifies the classification and naming of loss-in-weight scales, metrological requirements, technical requirements, inspection rules, marking, packaging, transportation and storage, and descriptions. The corresponding experimental methods were developed. This document applies to designs that utilize the principle of gravity to integrate a weighing hopper, material conveyor, motor, and load cell into a single, integrated force-bearing machine. The structure uses a continuous weight output method, measuring the continuously decreasing weight value output in the material conveyor and comparing this value with a set value. A loss-in-weight scale that aims to obtain accurate and continuous output (reduction) of weight and accumulate weighing results by approaching the control target value. This document does not apply to electronic screw scales that use screw conveyors as carriers or constant-flow dynamic conveying systems that use belt conveyors as carriers. Quantitative belt scale.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For

references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 191 Pictorial Symbols for Packaging and Storage

GB/T 755 Ratings and Performance of Rotating Electrical Machines

GB/T 2423.1 Environmental testing of electrical and electronic products - Part

3 Radio frequency electromagnetic field radiated immunity testing

GB/T 17626.4 Electromagnetic compatibility testing and measurement techniques - Electrical fast transient/burst immunity test

GB/T 17626.5 Electromagnetic compatibility testing and measurement techniques - Surge (impulse) immunity test

GB/T 17626.6 Electromagnetic compatibility testing and measurement techniques - Conducted disturbance immunity induced by radio frequency fields

GB/T 17626.11 Electromagnetic compatibility testing and measurement techniques - Part

11. Voltage of equipment with input current less than 16A per phase Sag, short interruption and voltage change immunity tests

GB 19517 National Technical Specification for Safety of Electrical Equipment

GB/T 23111-2008 Non-automatic weighing instruments

GB/T 26389 Method for Compiling Model Numbers of Weighing Instruments QB/T 1588.1

General Technical Requirements for Welded Components of Light Industrial Machinery

QB/T 1588.2 General Technical Conditions for Machining Parts of Light Industrial Machinery